



Isolated Link Coupler

Cat. No. 1791-AIC

Installation Data

To the Installer

This document provides information on:

- description of the isolated link coupler
- important pre-installation considerations
- power requirements
- description
- installation
- wiring connections
- status indicator

Description

The isolated link coupler provides a means of connecting programming or monitoring devices to be remotely linked to the programmable controller or SLC controller. It provides connection to both DH+ and DH-485 networks. The unit provides both a mini-DIN port and an RJ-11 port connection.

Pre-installation Considerations

The isolated link coupler can be mounted at the bottom of a 1791 large block I/O module (e.g. 64-point or 128-point) or remotely up to 10,000 cable-feet from the programmable controller, or up to 4,000 cable-feet from the SLC[®] scanner module. When mounted under a large block module, make sure that you allow sufficient space beneath the isolated link coupler to sustain the required spacing between units for cooling.

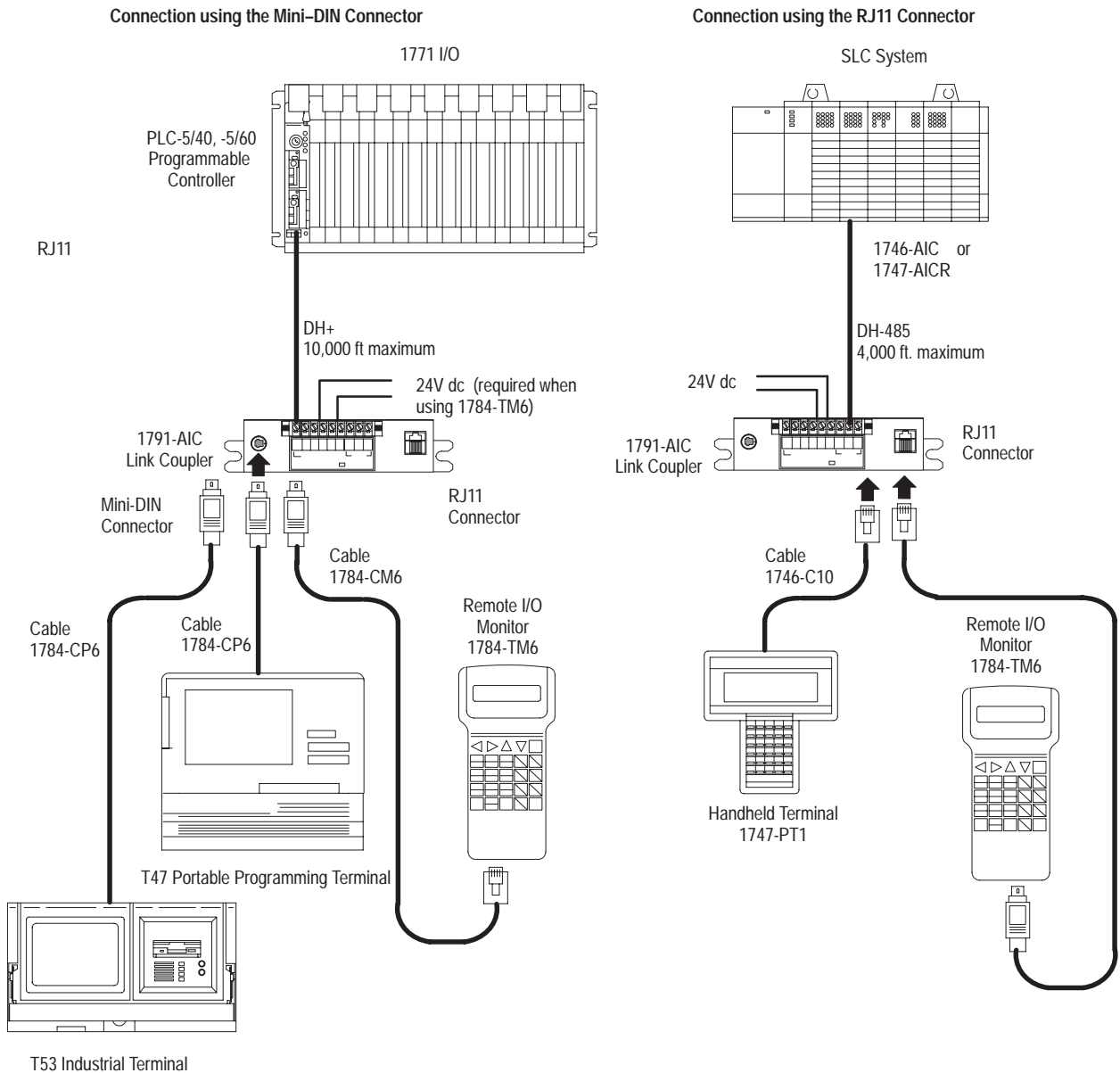
Power Requirements

The isolated link coupler requires a power supply with a rating of 24V dc (+10%, -15%) when used with a 1784-TM6 I/O monitor or when used with the SLC system. The supply must be capable of supplying a minimum current of 70mA (280mA when using the 1771-TM6 I/O monitor).

Description

The isolated link coupler module (cat. no. 1791-AIC) provides an interface to Data Highway Plus® (DH+) and DH-485 communication links. The DH+ connection lets you remotely connect a programming terminal such as an Allen-Bradley T47. The DH-485 connection lets you connect a handheld terminal and the SLC processor. Both DH+ and DH-485 terminations on the 1791-AIC can be used at the same time.

Figure 1
Link Coupler Sample Connection Diagram using a T47 Terminal or Handheld Terminal



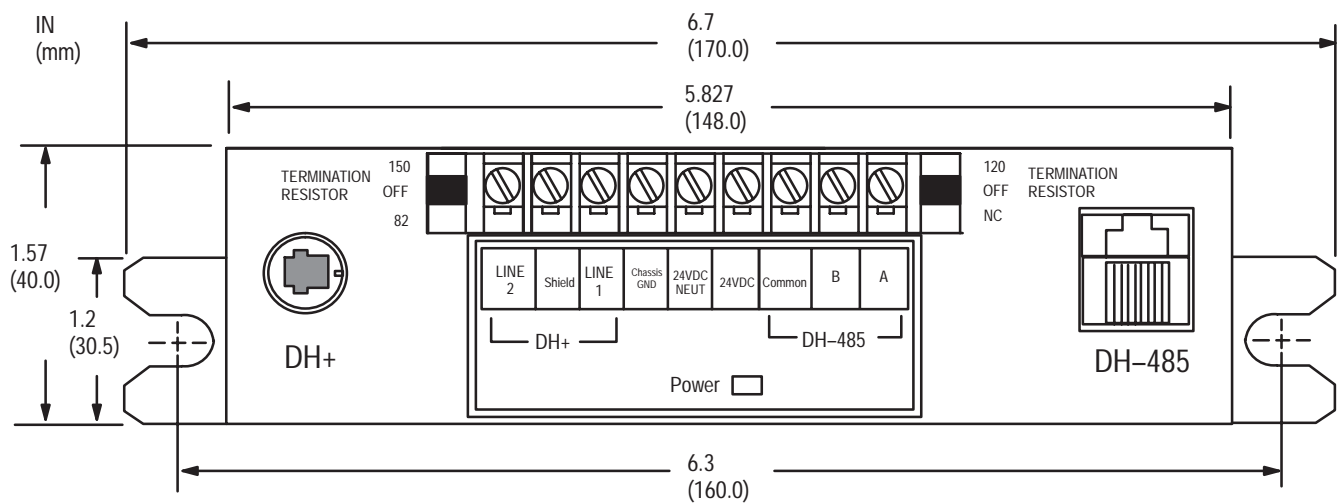
Installing the Isolated Link Coupler

To install the 1791-AIC module, proceed as follows:

Mounting Separate from a Block I/O Module

1. Select a position for mounting. The AIC module can be mounted either horizontally or vertically. Mounting dimensions are shown in Figure 2.

Figure 2
Mounting Dimensions for the Isolated Link Coupler (cat. no. 1791-AIC)

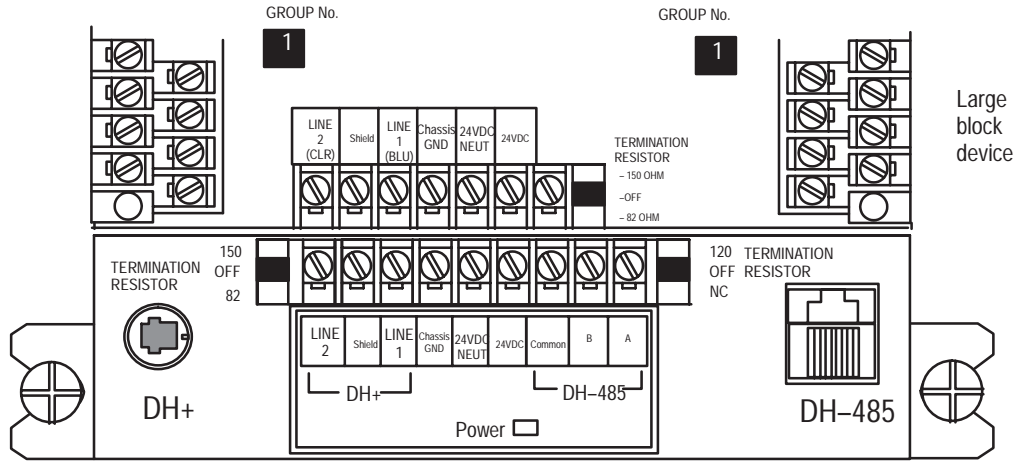


2. Secure the AIC module with two 1/4-inch mounting screws or bolts.
3. Make wiring connections to the terminal block on the AIC module as described in Connecting Wiring.
4. Use a flat-bladed screwdriver to position the termination resistor switch for your application.

Mounting Under a Block I/O Module

1. Refer to Figure 3. Position the AIC module against the bottom of the large block I/O module. The indented area at the top of the AIC module fits over the mounting screws securing the large block I/O module.
2. Secure the AIC module with two 1/4-inch screws or bolts.
3. Make wiring connections to the terminal block on the AIC module as described in Connecting Wiring.

Figure 3
Mounting the Link Coupler module under a large block I/O module.



4. Use a flat-bladed screwdriver to position the termination resistor switch for your application.

Connecting Wiring

When using remote I/O, connect wiring as shown in Figure 4. When using DH-485, connect wiring as shown in Figure 5.

Figure 4
Connecting Wiring for Remote I/O (DH+)

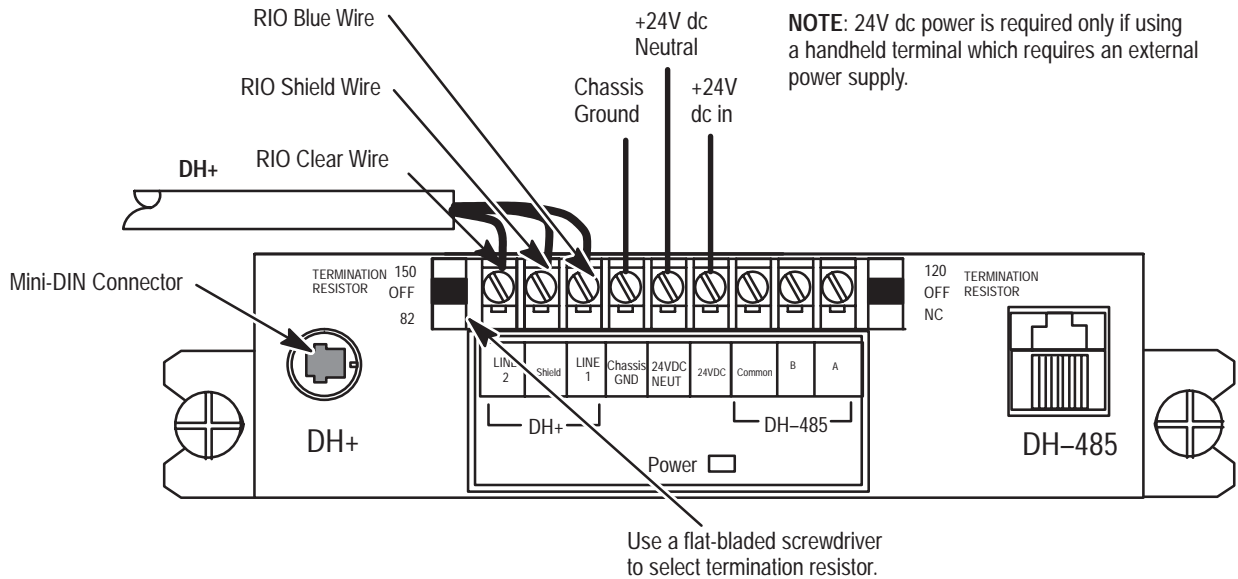
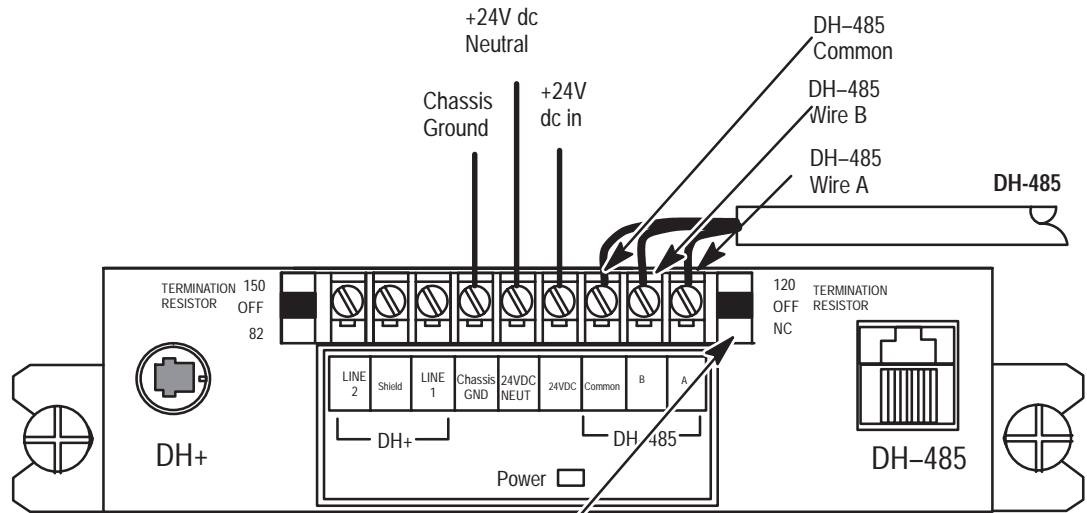


Figure 5
Connecting Wiring for DH-485



NOTE: 24V dc power is required with SLC systems.

Use a flat-bladed screwdriver to select termination resistor.

Table 1
Terminal Strip Terminal Assignments

| Position | Assignment |
|----------|-----------------|
| 1 | DH+ line 2 |
| 2 | DH+ shield |
| 3 | DH+ line 1 |
| 4 | Chassis Ground |
| 5 | +24V dc Neutral |
| 6 | +24V dc |
| 7 | DH-485 Common |
| 8 | DH-485 Line B |
| 9 | DH-485 Line A |

Table 2
Connecting Cable for Peripherals

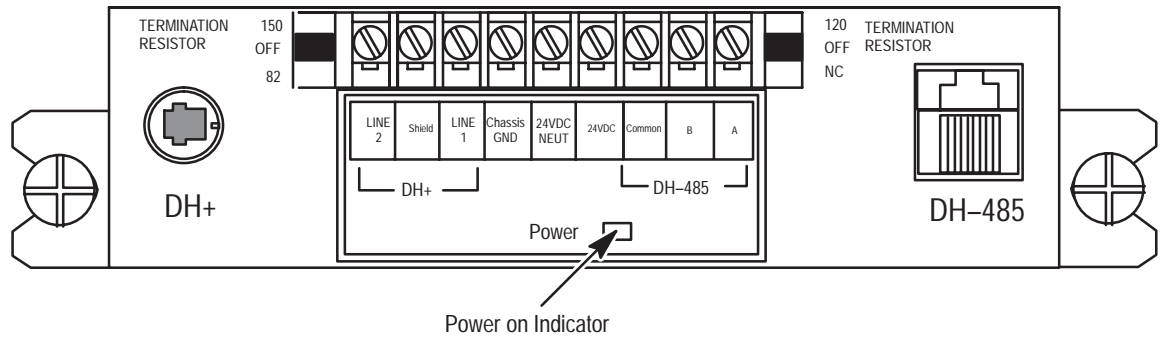
| Connect to the Mini-DIN Port | Using Cable | Connect to the DH-485 (RJ-11) Port | Using Cable |
|-----------------------------------|----------------------------------|---|-------------|
| T47 Portable Programming Terminal | 1784-CP6 or 1784-CP and 1784-CP7 | Handheld Terminal 1747-PT1 ¹ | 1746-C10 |
| T53 Plant Floor Terminal | | I/O Monitor 1784-TM6 ¹ | 1784-CM6 |
| I/O Monitor 1784-TM6 ¹ | 1784-CM6 | | |

¹ Requires 24V dc power to Isolated Link Coupler

Status Indicators

The link coupler has only one status indicator. When the indicator (Figure 6) is **on** the link coupler has power.

Figure 6
Power Indicator



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Cat. No. 1791-AIC

Allen-Bradley Automation

Specifications

| | |
|----------------------------------|--|
| Voltage Requirements | 24V dc (+10%, -25%) |
| Maximum Current | 70mA 280mA with 1784-TM6 attached |
| Communication Capability | DH+ – up to 10,000 cable feet DH-485 – up to 4,000 cable feet |
| Maximum Remote Mounting Distance | programmable controller (DH+) – 10,000 cable feet SLC (DH-485) – 4,000 cable feet |
| External Connections | One 8 pin DIN connector One 8 pin DH-485 connector |
| Isolation Voltage | 850V dc for 1s 600V ac for 1s |
| Environmental Conditions | |
| Operating Temperature | 32 to 140°F (0 to 60°C) |
| Storage Temperature | -40 to 185°F (-40 to 85°C) |
| Relative Humidity | 5 to 95% noncondensing |



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